2 2 FEB 2005

Dr. James A. Tegnelia
Chair, Army Science Board
2511 Jefferson Davis Highway, Suite 11500
Arlington, Virginia 22202

Dear Dr. Tegnelia:

I request that the Army Science Board (ASB) conduct a study on the adequacy of the current investment in rotorcraft technologies to support Force Application and Focused Logistics Joint Functional Concepts by organizing an ASB Study Panel, "Future Force Aerial System Capabilities". The study should address, but is not limited to, the Terms of Reference described below. The intent is to identify the complete set of technology areas which warrant Army investment initiatives to enable the full-spectrum of Future Force aerial system capabilities.

Background:

Joint Operations Concepts envision a Joint Future Force that will achieve full-spectrum dominance. Future Combat Systems, Vertical Mounted Maneuver, Logistics Over-the-Shore, Ship to Objective Maneuver, Sea Basing, and Expeditionary Operations are all current or emerging concepts that support this vision. These concepts all state or imply the need for a joint, vertical capability.

Annex D Aviation Transformation of the Army Campaign Plan provides direction for planning, preparation, and execution of a full range of tasks necessary to create and sustain a campaign-quality Army Aviation force with joint and expeditionary capabilities. The intent of Aviation Transformation is to produce evolutionary and revolutionary changes to improve Army and Joint Force capabilities to meet current and future full-spectrum aviation requirements. The end state is an Army Aviation Future Force structure, optimized for the joint fight that is deployable, modular, interoperable, and interdependent with a shortened logistics tail.

The Army Aviation Modernization Strategy has a vision for a Future Force with Joint rotorcraft solutions: Joint Multi Role for the attack and reconnaissance missions; and Joint Utility and Joint Heavy Lift for the maneuver and sustainment missions.

Aviation Transformation requires capabilities focused technology investment across all rotorcraft mission sets. Assessment by the Army Science Board will assist in laying a baseline case for Current Force rotorcraft sustainment and modernization, and determining Future Force rotorcraft investment gaps, overlaps, risk and opportunities.

Terms of Reference:

Assess the current rotorcraft science and technology investment relative to the emerging requirements of Army Aviation Transformation.

Identify and assess the maturity of promising technologies for rotorcraft that may have application to future rotorcraft and that offer greater performance in range, lift, speed, agility, endurance, and operations in high/hot conditions, as well as those to reduce the cost and footprint of aviation systems and assess the potential of each to:

a. Improve the current fleet of helicopters;

b. Be incorporated in the near-term procurement of new helicopters;

c. Be the basis of developing a family of new joint rotorcraft that provides Maneuver, Maneuver Support and Combat Service Support for the Future Force.

Describe those science and technology, and research and development, activities that the Army should initiate in order to mature the technologies along with the funding requirements necessary to meet all the projected needs.

Determine the feasibility to demonstrate the technologies on a logical timetable consistent with a projected Army Aviation Modernization Roadmap.

Study Sponsorship: The study sponsors are the Assistant Secretary of the Army (Acquisition, Logistics and Technology), the Deputy Chief of Staff G-3, and the U.S. Army Materiel Command.

Study Duration: Please initiate the study in February 2005, provide an interim progress report in April 2005 and report out in June 2005.

Sincerely,

Claude M. Bolton, Jr.
Assistant Secretary of the Army
(Acquisition, Logistics and Technology)